AMENDED CLAIM SET:

1. (currently amended) A radiation image conversion panel comprising at least two phosphor layers each containing a stimulable phosphor and a binder, wherein an amount (by weight) of the binder to the stimulable phosphor in uppermost phosphor layer of the phosphor layers is greater than that of the binder to the stimulable phosphor in any other phosphor layer by at least 0.5 wt%; wherein the radiation image conversion panel is produced by thermo-compressing at least two sheets, which have been separately coated and dried; and the thickness of the uppermost layer is increased relative to the thickness of a layer beneath the uppermost layer.

2. (cancelled)

3. (previously presented) The radiation image conversion panel according to claim 1, wherein the amount (by weight) of the binder to the stimulable phosphor in the uppermost phosphor layer is greater than that of the binder to the stimulable phosphor in any other phosphor layer by 1 to 100 wt%.

4. (previously presented) The radiation image conversion panel according to claim 1, wherein the stimulable phosphor results a stimulated emission of a wavelength in the range of 300 to 500nm when

the stimulable phosphor is irradiated with stimulating rays of a wavelength in the range of 400 to 900nm.

5. (previously presented) The radiation image conversion panel according to claim 1, wherein the stimulable phosphor is a phosphor selected from the group consisting of a bivalent europium-activated alkaline earth metal halide phosphor, a cerium-activated alkaline earth metal halide based phosphor, and a cerium-activated rare earth oxyhalide based phosphor.

6. (previously presented) The radiation image conversion panel according to claim 1, wherein the stimulable phosphor has a grain size ranging from 1 to 15 μm.

7. (previously presented) The radiation image conversion panel according to claim 1, wherein the binder is a thermoplastic elastomer.

8. (previously presented) The radiation image conversion panel according to claim 7, wherein the thermoplastic elastomer includes at least one elastomer selected from the group consisting of polystyrene, polyolefin, polyurethane, polyester, polyamide, polybutadiene, ethylene vinyl acetate, polyvinyl chloride, natural rubber, fluorine-contained rubber, polyisoprene, chlorinated polyethylene, styrene-butadiene rubber, and silicon rubber.

9. (cancelled)

10. (previously presented) The radiation image conversion panel of claim 1, wherein the thickness of each phosphor layer is in the range of 20-500 μm.

11. (cancelled)

12. (previously presented) The radiation image conversion panel of claim 1, wherein the thickness of each phosphor layer is in the range of 50-300 μm.

13. (Cancelled)

14. (currently amended) A radiation image conversion panel comprising at least two phosphor layers each containing a stimulable phosphor and a binder, wherein an amount (by weight) of the binder to the stimulable phosphor in uppermost phosphor layer of the phosphor layers is greater than that of the binder to the stimulable phosphor in any other phosphor layer by at least 0.5 wt%, wherein the thickness of the uppermost layer is decreased relative to the thickness of a layer beneath the uppermost layer, and wherein the radiation image conversion panel is produced by thermo-compressing at least two sheets, which have been separately coated and dried.

15. (cancelled)

16. (previously presented) The radiation image conversion panel according to claim 14,

wherein said radiation image conversion panel comprises three to five phosphor layers and each phosphor layer contains a stimulable phosphor and a binder; and

wherein the amount of binder in each of said phosphor layers is gradually made smaller from the top layer to the bottom layer.

17. (withdrawn) A method of manufacturing a radiation image conversion panel that comprises at least two phosphor layers each containing a stimulable phosphor and a binder, wherein an amount (by weight) of the binder to the stimulable phosphor in uppermost phosphor layer of the phosphor layers is greater than that of the binder to the stimulable phosphor in any other phosphor layer by at least 0.5 wt%, and wherein the thickness of the uppermost layer is increased relative to the thickness of a layer beneath the uppermost layer, said method comprising the steps of:

providing at least two phosphor sheets of different thicknesses, each containing a stimulable phosphor and a binder, wherein an amount (by weight) of the binder to the stimulable phosphor in one said phosphor sheet is greater than that of the binder to the stimulable phosphor in any other of said phosphor sheets by at least 0.5 wt% and

wherein the sheet having the greater amount of binder is thicker than all of the remaining sheets, and separately coating and drying each of said sheets;

arranging said at least two sheets in layers with the sheet having the greater amount of binder on top, so that the thickness of an uppermost layer is greater than the thickness of a layer beneath the uppermost layer; and

thermo-compressing said at least two sheets each containing a stimulable phosphor and a binder, which have been separately coated and dried, to produce the layered radiation image conversion panel.

18. (withdrawn) A method of manufacturing a radiation image conversion panel that comprises at least two phosphor layers each containing a stimulable phosphor and a binder, wherein an amount (by weight) of the binder to the stimulable phosphor in uppermost phosphor layer of the phosphor layers is greater than that of the binder to the stimulable phosphor in any other phosphor layer by at least 0.5 wt%, and wherein the thickness of the uppermost layer is decreased relative to the thickness of a layer beneath the uppermost layer, said method comprising the steps of:

providing at least two phosphor sheets of different thicknesses, each containing a stimulable phosphor and a binder, wherein an amount (by weight) of the binder to the stimulable phosphor in one said phosphor sheet is greater than that of the binder to the stimulable

phosphor in any other of said phosphor sheets by at least 0.5 wt% and wherein the sheet having the greater amount of binder is thinner than all of the remaining sheets, and separately coating and drying each of said sheets;

arranging said at least two sheets in layers with the sheet having the greater amount of binder on top, so that the thickness of an uppermost layer is less than the thickness of a layer beneath the uppermost layer; and

thermo-compressing said at least two sheets each containing a stimulable phosphor and a binder, which have been separately coated and dried, to produce the layered radiation image conversion panel.